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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.           | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------------|------------------|
| 10/648,934  | 08/27/2003  | Stuart B. Smith      | 009608.0113                   | 4108             |
| 24283   | 7590        | 07/18/2006           | EXAMINER<br>MOORE, MARGARET G |                  |
| PATTON BOGGS<br>1660 LINCOLN ST<br>SUITE 2050<br>DENVER, CO 80264 |             |                      | ART UNIT<br>1712              | PAPER NUMBER     |

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/648,934             | SMITH, STUART B.    |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Margaret G. Moore      | 1712                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 to 25 is/are pending in the application.
- 4a) Of the above claim(s) 10 to 17, 20 to 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 to 9, 18, 19, 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/7/05</u>   | 6) <input type="checkbox"/> Other: _____                                    |

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1. The amendment filed 6/16/06 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the added definition of x, y and z on page 6.

Applicant is required to cancel the new matter in the reply to this Office Action.

2. Claims 3 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed does not support the newly added values of x, y and z, and as such this is considered to be new matter. In addition the examiner cannot find support for the parts by weight basis found in claim 25.

3. Applicants provide arguments asserting that the reference to SILRES® 1000, combined with the submitted technical data sheet, supports the claimed amendment. The Examiner does not agree. While applicants select values of "x", "y" and "z" that fall within the newly claimed range and meet the weight per epoxy equivalent, this does not mean that the product SILRES® 1000 actually meets the claimed values. There is nothing to indicate that "x", "y" and "z" in SILRES® 1000 meet the entire ranges of "x", "y" and "z" as claimed rather than only meeting one of the set of values (for instance only having a value of 4, 4 and 2, respectively). It appears that applicants are merely selecting "x", "y" and "z" values that fall within the disclosed weight per epoxy equivalent rather than basing this amendment on factual data of what the actual "x", "y" and "z" values for SILRES® 1000 are. If in fact applicants can establish from fact, not from picking and choosing or conjecture, what the actual values of "x", "y" and "z" for SILRES® 1000 are, they are requested to do so. As noted in the previous rejection, the

Examiner highly doubts that a commercially available silicone has such a wide range for the corresponding "x", "y" and "z" values. One would expect a specific trade name to have a specific structural formula, not a varying range.

4. Claims 3 and 6 to 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claim 3, R is not defined. The Examiner apologizes for not noting this in previous office actions.

For claims 6, 7 and 9, the Examiner maintains the rejection consistent with that noted for claims 8 and 9 in the previous office action. For instance, in claim 7, it is not clear who one can have 75 parts by weight of a polyoxypropylenediamine. This would result in the lower limit of 25 parts by weight of DMTDA and would total 100 parts by weight of the amine. This total, however, is based on the total polyol prepolymer chain extender and would not allow for the presence of the required epoxy functional silicone. Clarification is required.

Furthermore, in claim 8, the basis for the claimed parts by weight is undefined.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, 4, 5, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/10255, herein Herzig et al., for reasons of record.

The teachings in WO 02/10255 (as interpreted by Herzig et al.) have been detailed in previous office actions. Applicants have amended claim 1 to require that the amine reactant be present in a molar excess relative to the branched epoxy functional silicone. This does not distinguish the claims from the prior art.

On the bottom of page 14 applicants state that Herzig et al. differ from that claimed in that Herzig et al. teach a linear polysiloxane. The Examiner addressed this point in the previous office action. She acknowledged that Herzig et al. prefer linear siloxanes, but since the sum of  $a+b$  is  $\leq 2$  this clearly allows for some branching. Applicants' position that Herzig et al. only teach linear is not consistent with the prior art.

Applicants then state that the Examiner is "mischaracterizing" the Herzig et al. reference. They discuss aspects of an equimolar portion of epoxy functional silicone to amine reaction. This completely overlooks the fact that Herzig et al. teach many ratios other than 1:1, including as specifically recited preferred upper limits a 10:1, 5:1 or 4:1 polyamine to epoxy polysiloxane ratio. In fact, Herzig et al. anticipate the molar excess aspect of the claims.

Applicants start the second full paragraph on page 16 of their response with the statement that "...contrary to the Examiner's beliefs, if a branched silicone molecule was cold blended with an amine, such as Jeffamine 200...". The Examiner has no idea how applicants arrived at *their* belief of the "Examiner's belief" to this extent. It is not clear how this paragraph is supposed to support a position of novelty and/or unobvious.

Again, Herzig et al. teach, though not as a preferred reactant, a branched epoxy silicone. With this in mind, including the fact that Herzig et al. teach a polyamine molar excess, applicants' argument of unobviousness are not persuasive.

7. Claims 1, 2, 4, 5, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raleigh et al.

While Raleigh et al. do not specifically teach a molar excess of polyamine to epoxy functional silicone, this appears to be a limitation that would have been obvious and/or within routine experimentation for the skilled artisan.

Note for instance the bottom of column 4 which teaches weight percents of each reactant. This includes as a preferred amount a significantly small amount of siloxane proportionally to the co-reactant (i.e. polyamine). Also, while not providing a specific

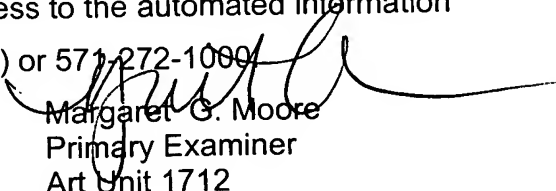
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molar ratio, the Examiner notes that one may only choose one of three ratios: 1) an excess of siloxane, 2) an excess of polyamine and 3) equimolar. Given the limited selection of molar ratios and the fact that Raleigh et al. prefer to use the siloxane as a small additive in the thermoplastic polymer (as indicated by the amount of siloxane used in the thermoplastic) the skilled artisan would have found the use of a molar excess of polyamine to have been obvious. Note that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (i.e. does not require undue experimentation).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret G. Moore whose telephone number is 571-272-1090. The examiner can normally be reached on Monday to Wednesday and Friday, 10am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1090.

  
Margaret G. Moore  
Primary Examiner  
Art Unit 1712

mgm  
7/8/06